

II. CLAIMS

1-10. Cancelled

11. (Previously Presented) A method of genotyping plants of the species *Triticum aestivum* and the genus *Triticeae* at a microsatellite locus, the method comprising

a) amplifying chromosomal DNA with one or more oligonucleotide primer pairs specifically hybridizing to said locus of a region of said chromosomal DNA, wherein said region of the DNA comprises a repeated motif to obtain an amplification product,

b) wherein each primer pair consists of a first oligonucleotide of SEQ ID NO. x and a second oligonucleotide of SEQ ID NO. x+1, and wherein x = 1, 3, 5, 7, 9, 11, 13, 15, 17, 19; and

c) size fractionating the amplification product to provide a measure of the said motif of the chromosomal DNA between said primer pairs,

wherein the size of the amplification product is polymorphic for said locus and provides a marker for genotyping said plants.

12. (Previously Presented) The method of claim 11, further comprising the step of using the resulting genotype for a further step chosen from the group consisting of DNA fingerprinting, species identification, relationship studies, similarity studies, characterization of cytological lines, and genetic mapping.

13-15. (Cancelled)

16. (New) The method claim 11, further comprising amplifying the chromosomal DNA with one or more primer pairs, wherein said primer pairs have a first oligonucleotide of SEQ ID NO: x and a second oligonucleotide of SEQ ID NO: x+ 1, and wherein x= 95, 111, 156, 293, 337, 369, 437, 493, 553, and/or 557.